

CLAIMS

What is claimed is:

- 5 1. A method for controlling subscriber access in a network capable of establishing connections with a plurality of services, comprising:
- receiving a communication from a subscriber using a first communication network
- coupled to a second communication network, said communication optionally
- including a domain identifier associated with a service on said second
- 10 communication network; and
- authorizing said subscriber to access a service on said second communication
- network using one of a plurality of virtual circuits, said authorizing based upon a
- domain configuration override attribute associated with the virtual circuit used to
- receive said communication from said subscriber.
- 15 2. The method of claim 1 wherein said authorizing further comprises:
- receiving from a memory a virtual circuit profile associated with said virtual circuit;
- assessing said virtual circuit profile to determine if a domain configuration override
- attribute exists within said virtual circuit profile; and
- 20 allowing said subscriber to connect exclusively to a service associated with said
- domain configuration override attribute when said domain configuration override
- attribute exists within said virtual circuit profile.

3. The method of claim 2, further comprising:

causing the subscriber to disconnect from all then existing network connections when

said domain configuration override attribute exists within said virtual circuit

5 profile and when said domain identifier in said communication does not match

said service associated with said domain configuration override attribute.

4. The method of claim 2 wherein said service request comprises a Point-to-Point Protocol (PPP) session service request.

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5. The method of claim 4 wherein

said PPP session comprises a tunneling session; and

said allowing further comprises assigning a tunnel ID.

- 15 6. The method of claim 5 wherein said tunneling session comprises an L2TP session.

7. The method of claim 6 wherein said receiving a virtual circuit profile further comprises performing a table lookup based upon a Virtual Path Identifier (VPI) / Virtual Channel Identifier (VCI) associated with said virtual circuit.

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8. A program storage device readable by a machine, embodying a program of instructions executable by the machine to perform a method to control subscriber access in a network capable of establishing connections with a plurality of services, the method comprising:

25 receiving a communication from a subscriber using a first communication network coupled to a second communication network, said communication optionally

including a domain identifier associated with a service on said second communication network; and

authorizing said subscriber to access a service on said second communication

5 network using one of a plurality of virtual circuits, said authorizing based upon a domain configuration override attribute associated with the virtual circuit used to receive said communication from said subscriber.

9. The program storage device of claim 8 wherein said authorizing further comprises:

10 receiving from a memory a virtual circuit profile associated with said virtual circuit; assessing said virtual circuit profile to determine if a domain configuration override attribute exists within said virtual circuit profile; and

allowing said subscriber to connect exclusively to a service associated with said domain configuration override attribute when said domain configuration override attribute exists within said virtual circuit profile.

10. The program storage device of claim 9, further comprising:

causing the subscriber to disconnect from all then existing network connections when said domain configuration override attribute exists within said virtual circuit profile and when said domain identifier in said communication does not match said service associated with said domain configuration override attribute.

11. The program storage device of claim 9 wherein said service request comprises a Point-to-Point Protocol (PPP) session service request.

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12. The program storage device of claim 11 wherein
 said PPP session comprises a tunneling session; and
 said allowing further comprises assigning a tunnel ID.

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13. The program storage device of claim 12 wherein said tunneling session comprises an
 L2TP session.

14. The program storage device of claim 13 wherein said receiving a virtual circuit
 profile further comprises performing a table lookup based upon a Virtual Path
 Identifier (VPI) / Virtual Channel Identifier (VCI) associated with said virtual circuit.

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15. An apparatus for controlling subscriber access in a network capable of establishing
 connections with a plurality of services, the apparatus comprising:
 means for receiving a communication from a subscriber using a first communication
 network coupled to a second communication network, said communication
 optionally including a domain identifier associated with a service on said second
 communication network; and

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means for authorizing said subscriber to access a service on said second
 communication network using one of a plurality of virtual circuits, said
 authorizing based upon a domain configuration override attribute associated with
 the virtual circuit used to receive said communication from said subscriber.

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16. The apparatus of claim 15 wherein said means for authorizing further comprises:

means for receiving from a memory a virtual circuit profile associated with said
virtual circuit;

5 means for assessing said virtual circuit profile to determine if a domain configuration
override attribute exists within said virtual circuit profile; and

means for allowing said subscriber to connect exclusively to a service associated with
said domain configuration override attribute when said domain configuration
override attribute exists within said virtual circuit profile.

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17. The apparatus of claim 16, further comprising:

means for causing the subscriber to disconnect from all then existing network
connections when said domain configuration override attribute exists within said
virtual circuit profile and when said domain identifier in said communication
15 does not match said service associated with said domain configuration override
attribute.

18. The apparatus of claim 16 wherein said service request comprises a Point-to-Point
Protocol (PPP) session service request.

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19. The apparatus of claim 18 wherein

said PPP session comprises a tunneling session; and

said means for allowing further comprises assigning a tunnel ID.

20. The apparatus of claim 19 wherein said tunneling session comprises an L2TP session.

21. The apparatus of claim 20 wherein said means for receiving a virtual circuit profile

5 further comprises a means for performing a table lookup based upon a Virtual Path Identifier (VPI) / Virtual Channel Identifier (VCI) associated with said virtual circuit.

22. An access server capable of forcing subscribers of a communications system to gain access exclusively to a domain network associated with a virtual circuit, said access

10 server comprising:

an authorizer capable of granting service authorization to said subscribers based upon a virtual circuit used to make a service request;

a virtual circuit profile request generator capable of generating virtual circuit profile requests;

15 an assessor capable of assessing said requested virtual circuit profile for a domain configuration override attribute; and

a calculator capable of determining whether the service associated with said virtual circuit matches the service associated with said domain configuration override attribute.

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23. The access server of claim 22, further comprising:

a receiving interface capable of accepting said service requests;

a forwarding interface capable of sending said virtual circuit profile requests to a memory bank; and

25 a second receiving interface capable of accepting requested virtual circuit profiles.

24. The access server of claim 22 wherein said service request comprises a Point-to-Point Protocol (PPP) session service request.

5 25. The access server of claim 23 wherein
said PPP session comprises a tunneling session; and
said calculator is capable of assigning a tunnel ID.

10 26. The access server of claim 24 wherein said tunneling session comprises an L2TP
session.

15 27. The access server of claim 25 wherein said assessor is capable of performing a table
lookup based upon a Virtual Path Identifier (VPI) / Virtual Channel Identifier (VCI)
associated with said virtual circuit.

20 28. The access server of claim 26 wherein said receiving interface comprises at least one
access multiplexer, each access multiplexer having a plurality of inputs for receiving
a service request, each of said inputs being associated with a particular subscriber
virtual circuit.

29. The access server of claim 23 wherein said memory bank and said access server
communicate using the Remote Authorization Dial-In User Service (RADIUS)
protocol.

30. An access server capable of forcing subscribers of a communications system to gain access exclusively to a domain network associated with a virtual circuit, said access server comprising:

- 5 a memory device capable of storing a plurality of virtual circuit profiles, said virtual circuit profiles capable of having a domain configuration override attribute associated with subscriber authorized services;
- an authorizer capable of granting service authorization to said subscribers based upon a virtual circuit used to make a service request;
- 10 a virtual circuit profile request generator capable of generating virtual circuit profile requests;
- an assessor capable of assessing said requested virtual circuit profile for a domain configuration override attribute; and
- a calculator capable of determining whether the service associated with said virtual circuit matches the service associated with said domain configuration override attribute.
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31. The access server of claim 29, further comprising:

- 20 a receiving interface capable of accepting said service requests;
- a forwarding interface capable of sending said virtual circuit profile requests to a memory bank; and
- a second receiving interface capable of accepting requested virtual circuit profiles.

32. The access server of claim 29 wherein said service request comprises a Point-to-Point Protocol (PPP) session service request.

5 33. The access server of claim 29 wherein
said PPP session comprises a tunneling session; and
said calculator is capable of assigning a tunnel ID.

10 34. The access server of claim 32 wherein said tunneling session comprises an L2TP
session.

35. The access server of claim 33 wherein said assessor is capable of performing a table
lookup based upon a Virtual Path Identifier (VPI) / Virtual Channel Identifier (VCI)
associated with said virtual circuit.

15 36. The access server of claim 34 wherein said receiving interface comprises at least one
access multiplexer, each access multiplexer having a plurality of inputs for receiving
a service request, each of said inputs being associated with a particular subscriber
virtual circuit.

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